

SECTION II

OPERATING PROCEDURES

2-29. CRYSTAL SOCKET. Insertion of proper 160-80-40 meter crystal, allows operation on all amateur bands, 160 meters through 10 meters.

2-30. SSB SOCKET. Input socket for use of external SSB exciter. SSB exciter must deliver SSB signal of 10-15 Watts. Located on rear apron of RF section chassis.

2-31. MICROPHONE CONNECTOR. Located on the front panel of the modulator section. Audio input is between pin 1 and ground. Push-to-talk connections are from pin 2, through push-to-talk switch and to ground.

2-32. KEYING JACK. Located on front panel of R.F. section.

2-33. RECEIVER DISABLING TERMINAL. Located on rear of power supply chassis. Provides 110 VAC to operate relay when transmit switch or push-to-talk is in ON position.

2-34. ANTENNA CONNECTORS. Located on rear of R.F. section. Two coax connectors marked ANT. and RECEIVER.

2-35. OPERATING HINTS.

2-36. Proper tune-up is necessary for optimum performance of the Globe King 500B transmitter. Attempted operation of the transmitter without proper tune-up may result in damage.

TABLE II. CRYSTAL CHART

Band	Crystal
160 meters	1800-2000 Kc.
80-75 meters	3500-4000 Kc.
40 meters	7000-7300 Kc.
20 meters	7000-7175 Kc.
15 meters	7000-7150 Kc.
11 meters	6740-6807 Kc.
10 meters	7000-7425 Kc.

WARNING

Operation of this equipment involves the use of high voltages which are dangerous to life. Observe all safety precautions! Do not attempt

to make adjustments inside the equipment, or change tubes with any power on. Disconnect the main power line before touching any high voltage components.

Dial settings in Table III are typical for frequencies and resistive loads indicated. A deviation of more than 10% from these readings indicates a reactive load presented to the transmitter, causing improper tuning. When the loading control is advanced from the minimum position to obtain loading, the final plate tuning control should NOT have to be retuned more than a degree or two from it's original setting of resonance. If when advancing the loading control clock-wise, the plate tuning control has to be retuned excessively to obtain resonance again, this indicates excessive reactance is present. This should be corrected immediately, as operating under these conditions will cause R.F. heating of the Pi network coils, resulting in damage to them, as well as the band-switch. Overloading of the transmitter is evidenced by the operator being unable to obtain a low enough plate current reading at resonance, even with the loading control at minimum, or by DECREASE OF FINAL PLATE CURRENT AS LOADING CONTROL IS INCREASED (clock-wise rotation of load control). The above condition of overloading with the load control at minimum usually indicates that a very low impedance is being presented to the Pi network, below 50 ohms, and an impedance step-up device, such as an antenna tuner, balun coils, etc., should be used to increase the feed point impedance to a point within the range of the Pi network. An antenna that would normally be assumed to have an impedance of around 70 ohms may also have a reactive component that is quite large, giving a total complex (reactive and resistive) load far higher or lower than would be usual. The use of a matching device, such as an antenna tuner, is not normally necessary, except when using a very low impedance beam, or very high impedance long wire, or similar antenna. For easiest loading we recommend the following type an-

TABLE III. TYPICAL DIAL SETTINGS FOR RESISTIVE LOADS

FREQ. KC	OSC. DIAL	BUFF. DIAL	FINAL PLATE DIAL	ANT. COUPLING SWITCH		ANT. LOADING DIAL	
				52 OHM	300 OHM	52 OHM	300 OHM
1975	6	6	4 $\frac{1}{2}$	*	160 M.	*	5
3925	6	2	3	4	2	7 $\frac{1}{2}$	4 $\frac{1}{2}$
7125	7 $\frac{3}{4}$	3 $\frac{1}{2}$, 5	2 $\frac{1}{2}$	3 $\frac{1}{2}$	1	5 $\frac{1}{2}$	5
14,250	7	6 $\frac{1}{2}$	3 $\frac{1}{2}$	12	1	23	4 $\frac{1}{2}$
21,365	11	1 $\frac{1}{2}$	2 $\frac{1}{2}$	11	1	4 $\frac{1}{2}$ 1/2	5 $\frac{1}{2}$
28,500	7	1 $\frac{1}{2}$	2	1	1	5 $\frac{1}{2}$ 4 2	6

* Indicates that a match to a resistive 52 ohm load requires an external matching circuit.